

The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOL. LV, No. 6

CHICAGO, ILLINOIS

AUGUST 6, 1910

THE SURGICAL CONSIDERATION OF CON- GENITAL AND DEVELOPMENTAL DE- FECTS LEADING TO OBSTINATE CONSTIPATION *

JOHN G. CLARK, M.D.
PHILADELPHIA

To arrive properly at a basis for the study of constipation and typanitis, with their coincident autointoxication, one must start well back of the condition of disability and investigate the various embryologic, anatomic, and physiologic factors which may ultimately promote the train of pathologic symptoms.

Probably no condition is more lightly viewed by physicians in general than constipation, possibly because it is so common, and possibly, also, because in many instances it is more or less easily set aside by laxatives. Unless, therefore, this symptom becomes so exaggerated as to suggest a possible obstruction, it is usually viewed with professional equanimity. There is a growing tendency to look on the various laboratories of the human body as the generating ground, not only of physiologic, but under abnormal conditions of various pathologic products, in one instance beneficent, in the other very deleterious to health. The thyroid has already taken its place as the emanating source of various toxic principles, likewise the adrenals, the tonsils, etc. From that vast group of individuals who are designated neurasthenics have been culled certain groups which may be traced to these sources. Of late years the gastro-intestinal tract has been found to be a prolific source of neurasthenic symptoms, and such radical enthusiasts as Metchnikoff would have us believe that the colon, because of these noxious emanations, is a worse than useless reservoir, and following this train of thought Arbuthnott Lane advises the extirpation of this organ in chronic constipation and claims brilliant results from the operation. Between all radical negative and positive viewpoints of a theoretical nature there is usually a happy midway position; to ignore the colon as a source of trouble would be heresy, for it is self-evident that fecal stasis is a source of serious autointoxication. On the other hand, as we better understand this question, the total excisions of the colon would appear too radical. For Cannon's work indicates beyond question that the large intestine has a very important function in the absorption of residual food products passed on from the small intestine. It is therefore not a temporary reservoir but a very important food receptacle from which much nutrition is abstracted.

COMPARATIVE ANATOMY

There is no organ in the body with such diversity of morphology to suit variations in function in different species of animals as the intestinal tract. The stomach actively participates in the mixing and digestion of certain portions of foods; the small intestine, beginning with the duodenum, further elaborates the process, and from that point on not only digestion but active absorption is taking place. The physical life of the animal, bird or reptile, and the character of food which it ingests, appear to determine the morphology of the small and large intestine. Thus, as stated by Huntington, in such creatures as birds which make long flights, requiring not only sustained effort but incredible repetitions of dynamic explosions, the food must be rapidly absorbed, and there is no place for residual food from which slow abstraction of nutrition occurs. For instance, the canvasback duck has relatively a very long small intestine and a very short colon, almost of a cloacal type. On the contrary, the ostrich, which is slower of movement and feeds on a more bulky food, has a very long colon. The wide variation in animals is noted in such birds of prey as, for instance, the eagle; the length of the colon as compared with the small intestine is only 1 to 68 or 70, while in the cassowary, a species of ostrich, it is 1 to 6, or practically more than ten times as long. In animals which have long resting periods with only occasional demands for great rapidity and sustained effort, the colon is usually very capacious, in some species becoming an enormous reservoir.

As the result of his splendid research in the comparative physiology of the large intestine, Huntington¹ says:

While digestion of food substances will not be inaugurated in the large intestine, material already in the process of digestion and mixed with the intestinal juices of the preceding segment will be further elaborated in this portion of the canal and the nutritive products absorbed. This is especially the case in herbivora and omnivora, whose food is bulky, containing a large amount of refuse material and is hence only slowly digested. On the other hand the food of the carnivora is easily and rapidly digested and absorbed. After passing through the small intestine hardly any substances remain which are capable of digestion and absorption. Hence the large intestine of herbivora and omnivora is usually longer in proportion to the small intestine than it is in carnivorous animals. In the former this segment of the canal functions as an accessory digestive apparatus and hence often develop accessory structural modifications, such as a large cecum and spiral colon, while in the latter it acts almost solely as a canal for the evacuation of the indigestible remnants. Again, the large intestine is better developed in the higher animals, in mammalia and to a lesser degree in birds, in whom the functional demands for nutrition are active and require that a relatively large amount of food should pass through the digestive tract in a given time.

1. *Anatomy of Peritoneum and Abdomen*, p. 198.

* Chairman's address before the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Sixty-first Annual Session, held at St. Louis, June, 1910.

* For reasons of space, the article is slightly abbreviated by the omission of some of the case reports. The complete article appears in the Transactions of the Section and in the author's reprints.

and mentioned in THE JOURNAL, page 95. He found it very satisfactory, enabling suture of tears in the perineum, application of forceps and extraction of the fetus, even in primiparae, without pain, besides various gynecologic operations. No untoward by-effects were observed in any instance. He advises injecting a considerable amount of the anesthetic fluid around the pudic nerve (N. pudendus), injecting it in different directions and at various depths, thus encircling the nerve and its branches near the ischio-rectal fossa. The attempt to act directly on the nerve trunk in the sacrosacral foramen he regards as dangerous on account of the liability of injury to the contiguous vessels. This perineural technic, he adds, is like using shot rather than a bullet; the result is less elegant, but it is more readily attained and surer. A single injection generally proved ample in his experience; only exceptionally was a second required. By the exclusion of the anesthetized pudic nerve it proved possible to analyze the elements of the labor pains; only the pain resulting from the stretching of the vulva and perineum was abolished by this means. The course of the nerve is palpated by the finger in the rectum or vagina as well as through the perineum. The spine of the ischium is the inner sidepost of the great sacrosacral foramen through which the nerve emerges and is useful in locating the nerve; the injection is best made along the stretch of the nerve between the ischio-rectal fossa and the lesser sacrosacral foramen. The point of injection is readily marked with the thumb of the palpating hand, to the side of the anus, about the middle of the inward slope of the tuberosity of the ischium, while the middle finger in the vagina locates the spine and the index finger controls the progress of the needle. The control can also be made by a finger in the rectum. Sellheim combined this method of local perineural pudendal anesthesia with the scopolamin-morphin preliminary technic in some cases and found it quite satisfactory.

146. Congenital Tuberculosis.—Hamm insists that the discovery of tubercle bacilli in the placenta is no evidence that the fetus is infected with them, and that inoculation of animals in case of negative histologic and bacteriologic findings in the fetus is the only way to solve the problems involved.

Gazzetta degli Ospedali e delle Cliniche, Milan

June 23, XXXI, No. 75, pp. 793-800

- 147 Appendicitis. (Note pratiche sull'appendicite.) B. Oreste.

Policlinico, Rome

July 3, XVII, No. 27, pp. 855-866

- 148 Treatment of Cancer with Autolysates of Human Fetuses. (L'azione dei prodotti di autolisi fetali omogenei sui tumori maligni dell'uomo.) G. Fichera.

148. Treatment of Cancer with Autolysates of Human Fetuses.—As age seems to be such an important factor in the development of cancer, Fichera has been conducting research to determine whether fetal and embryonal tissue does not possess some property or contain some element which would have a curative action on cancer patients treated with it. He has applied this treatment in 36 cases of inoperable cancer and 18 have been given a systematic course; 8 of the patients did not seem to be benefited but in the 10 others a favorable influence seemed unmistakable. In 5 of the patients the malignant tumors seem to have entirely retrogressed or repeated microscopic examination of excised scraps has shown that the cancer tissue has been transformed into ordinary connective tissue. In these 5 cases the cancer was in the breast in 3 and in the lower rectum or thyroid in the others. The injections of embryonal tissue were made into the lesion or at a distance, the former method being most active in results. The change in size and consistence of the tumor does not always parallel the actual therapeutic results, which can be distinguished only with the microscope. He uses autolysates of human fetuses, the tissues mixed with about 20 parts physiologic salt solution, with a little thymol or phenol, with a layer of oil or toluol on top, and kept at a constant temperature of 37 C. (99 F.) for about two months, when it is ready for use after its sterility has been tested and found complete. The autolysate forms a homogeneous suspension by this time, and he injects 2 or 3 c.c. from two to four times a week, continuing for months according to indications. Continuing treatment

for a time after complete cure of the cancer there was no tendency to recurrence in his clinical and experimental experience, and he is confident that when this method of treatment can be applied to less desperate cases than those in which he tried it, the results will be proportionately better. The work issues from the university surgical institute at Rome in charge of Durante.

Hospitalstidende, Copenhagen

May 25, LIII, No. 21, pp. 569-600

- 149 A New Apparatus for Differential Pressure. (Teknisk Redegørelse for et nyt Apparat til Overtryksrespiration.) H. Møllgaard.
- 150 Endogenous Gonorrheal Lesions in Cornea and Skin. (Om endogene gonorrhoiske Hornhinde- og Hudaffektioner.) C. F. Heerfordt. Commenced in No. 19.
- June 1, No. 22, pp. 601-632
- 151 Case of Fatal Abdominal Actinomycosis. (Et Tilfælde af Underlivsaktinomykose.) E. Frølich.
- June 8, No. 23, pp. 633-656
- 152 Periodic Vomiting and Acetonuria in Children. (Om periodiske Opkastninger og Acetonudskillelse hos Børn.) C. E. Bloch.
- 153 Elective Staining of Living Tissue and Living Microbes under the Ultramicroscope. (Elektiv Färvning af det levende Væv og den levende Mikrob og Undersøgelse heraf ved Hjælp af Ultramikroskopet.) J. Føllberg.
- June 22, No. 25, pp. 681-704
- 154 Titration Tuberculin Test. (Undersøgelser over Tuberkulintitrens diagnostiske Betydning.) A. Erlandsen and O. V. C. E. Petersen. Commenced in No. 24.

149. Differential Pressure Apparatus.—Møllgaard regards emphysema as a compensatory process in certain cases and the experiences with the differential pressure procedures confirm, he asserts, the correctness of this view. The emphysema is the result of reflex action to relieve the circulation through the region, and in all operations on the thorax the production of a compensating emphysema should be promoted. Collapse of the lung compresses the capillaries while an increase in the size of the lung increases the diameter of the capillaries unless this increase is excessive, when it drags on the capillaries and narrows their lumen. These are the principles on which is based this new apparatus devised by Rovsing, which is here described and illustrated. It aims to keep the pressure in the lung constant, independent of the phases and volume of the respiration, this constant pressure never exceeding the normal capillary pressure, but is capable of adjustment to the individual case.

150. Gonorrheal Eye and Skin Lesions.—Heerfordt reports a number of cases of lesions in the subcutaneous tissue and cornea developing in persons with gonorrheal general infection. Subepidermoid vesicles frequently develop in the course of the superficial dermatitis, and the vesicles may be grouped to resemble herpes even without any preceding dermatitis. These gonorrheal skin affections frequently display a hemorrhagic tendency and the dermatitis is sometimes accompanied or introduced with rheumatoid pains, suggesting involvement of the peripheral nerves. Keratitis was observed in 8 of his 23 cases of gonorrheal epibulbar subconjunctivitis and also in a few other cases. The phlyctenular, herpetic or parenchymatous keratitis, complicating the gonorrheal subconjunctivitis, is evidently of endogenous origin. He gives a plate of the ocular findings in 12 cases to illustrate the various types mentioned. The gonorrheal manifestations in the skin are also liable to assume this same phlyctenular or herpetic character. In 537 cases of gonorrhea in women he found record of herpes outside the genital region in 7 and in 10 out of 1,773 men; the proportion is probably larger in reality as only the severer forms of herpes were recorded. He reviews the literature on the subject, adding that both the ocular and cutaneous manifestations are generally mild and comparatively transient.

152. Periodical Vomiting and Acetonuria in Children.—Bloch reports another case of this combination; his patient was a boy of about 3 much depressed by the periodical vomiting. The odor of acetone permeated the air of the room. He had seven attacks of the recurring vomiting, each accompanied by much acetonuria, during the two years afterward, but then he seemed to outgrow the tendency and is now an apparently healthy child. Adenoid vegetations were removed in the interim.